**IN THE CLAIMS:**

1. – 46. (Cancelled)

47. (Previously Presented) A monitoring device for monitoring a household electric user presenting an electric load, the monitoring device being ~~connected between a source of electric energy and the electric load~~ and including:

A. a detector, connected between a source of electric energy for the household electric user and the electric load of the household electric user, ~~for~~ determining at various times the quantity of electric power or current absorbed by the household electric user,

B. a memory for retaining reference data or profiles of electric power or current that are absorbed during operating cycles of a corresponding type of electric user;

C. a processor for determining status information that is representative of the present status or phase of operation of the household electric user based on the quantities of electric power or current determined by the detector and the stored reference values; and

D. communication means for providing the status information to an external device.

48. (Previously Amended) The device, according to claim 47, wherein,

i. the processor further determines efficiency information being representative of the efficiency or performance status of the household electric user based on

the quantity of electric power or current determined by the detector and the stored reference values, and

ii. the communication means provides the efficiency information to an external device.

49. (Previously Presented) The device, according to claim 47, wherein,

i. the processor further determines wear information relating to estimating the wear status of components of the household electric user, and

ii. the communication means provides the wear information to an external device.

50. (Previously Presented) The device, according to claim 47, wherein the reference data or profiles contained in the memory are representative of a theoretical level of absorption of electric power or current that the household electric user would absorb if operating correctly under normal conditions.

51. (Previously Presented) The device, according to claim 50, wherein the processor compares the quantities determined by the detector with the reference data or profiles to determine the status information.

52. (Previously Presented) The device, according to claim 47, wherein the processor provides the status information to the memory.

53. The device, according to claim 52, wherein the processor further:

a. determines efficiency information indicating the quality of operation of the household electric user and/or the efficiency status of its internal components, the efficiency information relating to deviations which are considered significant between the quantities determined by the detector and the stored reference data or profiles,

b. determines wear information relating to the wear status of components of the household electric user and/or the modes of previous use of the household electric user, and

c. retains the efficiency and wear information in the memory.

54. (Previously Presented) The device, according to claim 47, wherein the communication means includes a connection to a communication bus, the communication means making the status information available to the bus and receiving instructions from the bus.

55. (Previously Presented) The device, according to claim 47, wherein the communication means is a connection to an external electronic apparatus the communication means providing the external electronic apparatus access to the status information and access to the programming of the device.

56. (Previously Presented) The device, according to claim 53, wherein the

communication means is a connection to an external electronic apparatus, the communication means providing the external electronic apparatus access to the status, efficiency and wear information and access to the programming of the device.

57. (Previously Presented) The device, according to claim 47, further including a switch that operates under the control of the processor for interrupting the electric supply to the household electric user.

58. (Previously Presented) The device, according to claim 54 further including a switch that operates under the control of the processor for interrupting the electric supply to the electric user, the processor controlling the switch based on instructions received over the bus.

59. (Previously Presented) The device, according to claim 47, further including configuration means for selecting, among a plurality of possible selections, the type of electric user that corresponds to the household electric user.

60. (Previously Amended) The device, according to claim 59, wherein

a. the memory contains a plurality of reference data or profiles relating to the operations of various types of electric user, and

b. the configuration means selects the reference data or profile relating to the particular household electric user that is associated with the device.

61. (Previously Presented) The device, according to claim 57, further including manual controls for the switch.

62. (Previously Presented) The device, according to claim 47, further including

a. a current differential sensor for detecting current leaks to ground,

b. the processor using the sensor readings to analyse the operations of the household electric user.

63. (Previously Presented) The device, according to claim 47, further including

a. a temperature sensor for sensing ambient temperature, and

b. the processor using the ambient temperature information to analyse the operations of the household electric user.

64. (Previously Presented) The device, according to claim 47, wherein the communication means is an asynchronous serial line.

65. (Previously Presented) The device, according to claim 56, further including acoustic and/or optical signalling means under the control of the processor for signalling anomalous conditions of operation of the household electric user.

66. (Previously Presented) The device, according to claim 58, further including acoustic and/or optical signalling means under the control of the processor for signalling the status of the switch.

67. (Previously Amended) The device, according to claim 58, wherein the processor receives information from one or more external sensors, where the one or more external sensors is a gas sensor, a flood sensor, or a smoke sensor, and the processor controls the switch to interrupt the electric supply based, in part, on the readings of the external sensors.

68. (Previously Presented) A method for monitoring the status of a household electric user, the method including the steps of:

A. measuring the absorption of electric power or current by the household electric user at various times;

B. analyzing the measured electric power or current absorption based on reference electric power or current absorption data or profiles relating to operating cycles of an electric user of a corresponding type;

C. determining status information being indicative of the status or phase of operation of the household electric user based on the results of step B; and

D. storing the status information.

69. (Previously Presented) The method of claim 68 further including

E. determining efficiency information relating to the efficiency of the

household electric user during the operating cycles based on reference data or profiles and the measured absorption; and

F. storing the efficiency information.

70. (Previously Presented) The method of claim 68 further including

E. determining wear information based on the number and types of operating cycles performed by the household electric user; and

F. storing the wear information.

71. (Previously Presented) The method of claim 70 further including

G. determining efficiency information relating to the efficiency of the household electric user during the operating cycles based on reference data or profiles and the measured absorption; and

h. storing the efficiency information.

72. (Previously Presented) The method, according to claim 68, wherein the absorption is measured instant by instant to determine an absorption profile which expresses the evolution in time of the real level of absorption of electric power or current by the household electric user.

73. (Previously Presented) The method, according to claim 68, wherein the reference absorption profile is representative of the evolution in time of a theoretical level of absorption of electric power or current that the household electric user would produce if

operating correctly.

74. (Previously Presented) The method, according to claim 68 further including a step of selecting the reference absorption data or profile from among a plurality of reference absorption data sets or profiles.

75. (Previously Presented) The method, according claim 74, wherein the reference absorption data sets or profiles are obtained through experimental analysis.

76. (Previously Presented) The method, according to claim 68, wherein the status information is of the functional type, concerning the present mode of operation of the household electric user.

77. (Previously Presented) The method, according to claim 69, wherein the efficiency information are of the diagnostic type, concerning the quality of operation of the household electric user and/or the efficiency status of its internal components, the efficiency information resulting from the detection of deviations being considered significant between the measured absorption and the applicable reference absorption data or profile.

78. (Previously Presented) The method, according to claim 70, wherein the wear information are of the statistical type, concerning the wear status of internal components of the household electric user and/or its modes of previous use.

79. (Previously Presented) The method, according to claim 78, wherein the wear information are determined based on an analysis of the status information over time.

80. (Previously Presented) The method, according to claim 70, further including the step of providing certain of the status, efficiency and/or wear information to a communication network to which a plurality of household electric users are connected.

81. (Previously Amended) The method, according to claim 80, wherein the information is used for estimating the functional and/or wear status of internal components of the electric user in aid in the repair and/or maintenance of the household electric user.

82. (Previously Presented) The method, according to claim 80, wherein certain of the information is used for rationing the electric power absorption in the household environment in which the electric user is installed.

83. (Previously Presented) The method, according to claim 82, further including the step of controlling, from a remote location, the operating status of the household electric user, for realizing the activation and/or deactivation of the user, based on the information provided over the communication network.

84. (Previously Presented) The method, according to claim 77, further including activation of acoustic and/or optical signalling means when the household electric user is malfunctioning.

85. (Previously Presented) A system for monitoring and controlling household appliances that utilize power from the electric mains, the system including:

A. one or more first household appliances that communicate over a communication network; and

B. one or more monitoring devices for monitoring and controlling a corresponding number of second household appliances, each monitoring device communicating over the communication network on behalf of the associated second household appliance and including:

i. a detector for determining at various times the quantity of electric power or current absorbed by the associated second household appliance,

ii. a memory for retaining reference data or profiles of electric power or current absorbed during operating cycles of a corresponding type of household appliance;

iii. a processor for determining status information that is representative of the present status or phase of operation of the second household appliance based on the quantity of absorbed electric power or current determined by the detector and the stored reference data or profiles; and

iv. a node for communicating on the communication network, the node providing the status information over the network.

86. (Previously Amended) The system, according to claim 85, wherein

v. the monitoring device further determines efficiency information representative of the efficiency or performance status of the associated second household appliance based on the quantity of absorbed electric power or current determined by the detector and the stored reference data or profiles, and

vi. the node provides the efficiency information over the network.

87. (Previously Amended) The device, according to claim 85, wherein,

v. the monitoring device further determines wear information relating to estimating the wear status of components of the associated second household appliance, and

vi. the node provides the efficiency information over the network.

88. (Previously Presented) The device, according to claim 85, wherein the reference data or profiles are representative of a theoretical level of absorption of electric power or current that the associated second household appliance would absorb if operating correctly under normal operating conditions.

89. (Previously Presented) The system of claim 85 further including

v. a meter for measuring electric power or current absorbed by the household, the meter communicating the measured household absorption values over the communication network, and

vi. at each of the first household appliances limiting power or current absorption based on the communicated household absorption values and a predetermined maximum absorption value, and

vii. at each monitoring device limiting the power or current absorption by the associated second household apparatus based on the communicated household absorption values and a predetermined maximum absorption value.

90. (Previously Presented) The system of claim 89 wherein the meter communicates the household absorption value with variable frequency based on how close the measured household value is to the predetermined maximum value.

91. (Previously Presented) The system of claim 85 wherein the communication network is a powerline carrier network.

92. (Previously Presented) The system of claim 85 wherein the monitoring device controls the activation and deactivation of the associated second household appliance based on information communicated over the communication network.

93. (Previously Presented) The system of claim 92 wherein the monitoring device controls the second household appliance based on information provided to the network by an external device.

94. (Previously Presented) The system of claim 93 wherein the information is supplied to the network by a mobile telephone.

95. (Previously Presented) The system of claim 93 wherein the information is supplied to the network from a remote network.

96. (Previously Presented) The system of claim 95 wherein the remote network is the internet.